

MEMORANDUM

TO: Members, Clark Fork Basin Water Management Task Force (Task Force)
FROM: Gerald Mueller
SUBJECT: Summary of the July 2, 2007 Task Force Meeting
DATE: July 3, 2007

Participants

The following people participated in the Task Force meeting:

Task Force Members:

Gail Patton	Sanders County Commissioner
Fred Lurie	Blackfoot Challenge
Nate Hall	Avista
Elna Darrow	Flathead Basin Commission
Marc M. Spratt	Flathead Conservation District/Flathead Chamber of Commerce
Matt Clifford	Clark Fork Coalition

Ex Officio Member

Sen. Verdell Jackson

Public

Dr. David Shively	University of Montana, Department of Geography
Mark Van Rinsum	Flathead Conservation District
Mike McLane	Montana Department of Fish, Wildlife and Parks

Staff:

Curt Martin	DNRC
Gerald Mueller	Consensus Associates

Meeting Agenda

- \$ June 11, 2007 Meeting Summary
- \$ Updates
 - B Task Force budget
 - B Task Force membership
 - B Hungry Horse Contracting Activities
- \$ Future Basin Water Needs
 - B Clark Fork River basin population forecasts
 - B Basin county growth plans
- \$ Basin Water Supply and Growth Conference
- \$ Water Right System Policy Paper
- \$ Next Steps
- \$ Public Comment
- \$ Next Meeting

June 11, 2007 Meeting Summary

The Task Force made no change to the June 11, 2007 meeting summary.

Updates

Task Force Budget - Curt Martin stated that he is working with Gerald Mueller to develop a contract to support the Task Force for the coming biennium. The Montana Bureau of Mines and Geology is completing its existing contract to produce open file reports associated with last fall's

ground water technical conference. There are also other unspent funds from the existing contract with Granite Conservation District, including \$5,000 for the Clark Fork River Basin roundtable. These funds may be made available for the water supply and growth conference that the Task Force is considering convening.

MBMG=s Tom Patton has recently emailed Gerald Mueller stating that MBMG will be producing three ground-water open file reports to complete its ground water conference obligations:

- \$ GWOF 19: Well densities in the Flathead Lake ground-water assessment area, Flathead, Lake, and Sanders Counties, Montana.
- \$ GWOF 20: Well densities in the Lolo-Bitterroot ground-water assessment area, Mineral, Missoula, and Ravalli Counties, Montana.
- \$ GWOF 21: Well densities in the Upper Clark Fork River ground-water assessment area, Deer Lodge, Granite, Powell, and Silver Bow Counties, Montana.

Each open-file report contains two sheets.

- \$ Sheet one depicts the development of wells in each basin in 1970, 1980, 1990, 2000, and 2005 as well as locations of wells visited during the ground-water characterization study, locations of statewide monitoring network wells, and some selected hydrographs from statewide monitoring wells near heavily drilled sections.
- \$ Sheet two depicts the location and number of wells in each basin that are ≤ 100 , between 100 and 300, and > 300 ft deep and that are within one mile of major streams. Also included are maps showing the locations of and number of wells used for irrigation, industrial, commercial, and public water supply that are within one mile of major streams.

Task Force Membership - Gerald Mueller reported that he has not heard if John Tubbs, DNRC Water Resources Division Administrator, and Steve Hughes have met with the Salish and Kootenai Tribes about their participation on the Task Force. DNRC has apparently taken no action regarding Task Force appointments.

Hungry Horse Contracting Activities - Gerald Mueller reported on his conversation with Tim Bryggman, an economist in the DNRC Water Management Bureau. Mr. Bryggman, along with Curt Martin, has been assigned to work on the contracting with the US Bureau of Reclamation for water stored in Hungry Horse. Mr. Bryggman said that he intends to meet with John Tubbs and Rich Moy, Water Management Bureau Chief, to develop a plan for pursuing a contract. Mr. Mueller stated that he will stay in touch with Mr. Bryggman and Mr. Martin to try to keep the contracting process moving.

Marc Spratt reported that the 2007 session of the Oregon Legislature passed a bill requiring an appropriation of water from the Columbia River. This is another indication that other states are continuing to pursue additional use of Columbia River water which may adversely affect Montana's ability to do the same. A copy of the Oregon statute is attached as Appendix 3.

Curt Martin stated that Idaho is moving ahead with a possible curtailment of ground water use in the Snake River basin on behalf of senior water users. Idaho Power is also suing the State of Idaho over the Swan Falls agreement which affects consumptive and instream flow water allocations on the Snake River. See the Idaho Department of Water Resources web page: www.idwr.state.id.us/ for more information.

Future Basin Water Needs

At its last meeting in June, the Task Force discussed attempting to assess the Clark Fork River basin's future need for water by multiplying population by average use of water per person. Arvid Hiller agreed to share data developed by Mountain Water Company about per capita water use, Gerald Mueller agreed to assemble data on basin population projections, and David Shively agreed to provide summaries of population information from the basin county growth plans. Mr. Hiller was unable to attend today's meeting, but will be prepared to present his information in September.

Gerald Mueller found three sources of population projections relevant to the Clark Fork River basin. One is from Dr. Larry Swanson's report contained in Appendix 3 of September 2004 *Clark Fork Basin Watershed Management Plan*. Dr. Swanson wrote, "At current rates of growth, basin-wide population will rise from over 300,000 in 2000 to around 350,000 by 2010." Mr. Mueller also located population projections by county on the Montana Department of Commerce Census and Economic Information Center web site. These projections were developed by NPA Data Services Inc. using an economic base model which builds population numbers from projections of economic sectors such as mining, timber, health care, etc. The projections are shown below in Appendix 1. For 2030, the total combined population for Deer Lodge, Flathead, Granite, Lake, Mineral, Missoula, Powell, Ravalli, Sanders, and Silver Bow Counties is projected to be 452,410. A portion of two other counties, Lewis and Clark and Lincoln are also included in the Clark Fork basin, but their major population centers, Helena and Libby/Troy/Eureka, are not in the basin. Mr. Mueller also found a report dated June 8, 2007 and entitled *Human Population Impacts on Columbia River Basin Fish and Wildlife* prepared for the Northwest Power and Conservation Council. This report projects the population of the portion of the Columbia River basin in Montana to be just in excess of 500,000 by 2030. The Columbia basin in Montana includes both the Clark Fork and Kootenai River basins. Mr. Mueller noted that some have criticized economic base forecasts as inaccurately capturing what is happening in areas such as western Montana which are growing independently of base economic sectors.

David Shively presented population data from basin county growth policies available over the internet and the same NPA Data Services, Inc. information presented by Mr. Mueller. See Appendix 2. Growth policies are available for Flathead, Granite, Lake, Missoula, and Ravalli Counties.

Task Force Member Comment - I agree that economic base models will likely not accurately forecast the economy and population of western Montana. Regardless of the projection(s) that we base future water needs assessment on, we must set out the assumptions that underlie it.

Basin Water Supply and Growth Conference

Gerald Mueller reviewed a preliminary draft outline for the conference, including suggestions provided by David Shively. See Appendix 3. Possible co-conveners with the Task Force include DNRC and the UM Department of Geography. Task Force members made the following suggestions concerning the outline.

- § Identify the intended target audience for the conference. The list suggested by Task Force members included: the Interim Legislative Water Policy Committee; basin county commissioners and city officials, including the planning offices and neighborhood councils; the Montana Department of Environmental Quality (DEQ); basin legislators; water professionals; large water users; realtors and conservation districts.

- \$ Include a panel on water allocation in the west to provide a context for decisions in Montana.
- \$ Include a panel on best practices for water use.
- \$ Consider involving the Sonoran Institute because of its assistance to local governments on growth related issues (Tim Davis is a possible contact).
- \$ Seek the participation of the Montana Association of Counties (MACO) as a possible co-convenor.
- \$ Target Mid-March 2008 as the conference dates.
- \$ Consider planning for a two day conference with breakout sessions interspersed throughout to encourage discussion among the participants.

Marc Spratt and Matt Clifford agreed to serve on a conference planning committee, along with David Shively, Gerald Mueller and Curt Martin.

Water Right System Policy Paper

Gerald Mueller passed out and discussed his revision of a possible Task Force policy paper on the status of the current water right allocation and management system. See Appendix 4.

Task Force member comments and suggestions on the outline included the following:

- \$ Add an item in section I, explaining the target audience for the paper, water decision and policy makers.
- \$ Under section II. A, add new items addressing the role of hydropower, the Columbia River Coordination Agreement, and flood control
- \$ Under section II. B, add new items on drought management plans, and EPA regulation of water quality. Also expand on item 3, federal and tribal water rights, to discuss the purpose of federal reserved water rights and the Confederated Salish and Kootenai Tribes= water right claims.
- \$ In section II. B. 6, list the purposes of the basin closures.
- \$ Under section II, add a new item discussing downstream appropriation issues.

Next Steps

Basin Water Supply and Growth Conference

- \$ Gerald Mueller with contact MACO, the Sonoran Institute, and DEQ to determine their interest in participating in the conference.
- \$ The steering committee will meet to continue conference planning.

Public Comment

There was no additional public comment.

Next Meeting

The next meeting was scheduled for Monday, September 17, 2007.

**Appendix 1
Montana
County Population Projections
NPA Data Services Inc.**

	2010	2015	2020	2025	2030
Silver Bow	32,600	32,590	33,010	33,730	34,790
Deer Lodge	8,490	8,230	8,160	8,170	8,320
Powell	7,260	7,490	7,810	8,080	8,480
Granite	3,160	3,250	3,360	3,510	3,670
Missoula	107,190	115,080	123,310	132,010	141,370
Ravalli	44,710	50,100	55,500	60,960	66,670
Flathead	91,750	100,250	108,910	117,870	126,730
Lake	30,710	33,300	35,980	38,800	42,210
Sanders	11,670	12,400	13,170	14,010	14,920
Mineral	4,290	4,480	4,700	4,950	5,210
Totals	341,830	367,170	393,910	422,090	452,410

Lewis & Clark	62,830	67,810	72,880	78,040	83,460
Lincoln	19,590	20,160	20,920	21,790	22,850
Totals	82420	87970	93800	99830	106310

Source: Census and Economic Information Center
http://ceic.mt.gov/Demog/project/NPAallcounties_1106_web.pdf

Appendix 2

Clark Fork Basin Demographic Information

David Shively, Dept. Geography, University of Montana

From Montana Census and Economic Information Center (MTCEIC):

MTCEIC publishes population projections generated for all counties in Montana by NPA Data Services, Inc. This is the most complete set of projections readily available for inspection, but other demographic information and data are provided for background purposes below. The NPA (2006) projections for Clark Fork Basin Counties through the year 2030 are shown in the table below.

Area	2000 Census	2005 Estimate	2010	2015	2020	2025	2030
Deer Lodge County	9,417	8,948	8,490	8,230	8,160	8,170	8,320
				100,25	108,91	117,87	127,25
Flathead County	74,471	83,172	91,750	0	0	0	0
Granite County	2,830	2,965	3,160	3,250	3,360	3,510	3,670
Lake County	26,507	28,297	30,710	33,300	35,980	38,800	41,730
Mineral County	3,884	4,014	4,290	4,480	4,700	4,950	5,210
			107,19	115,08	123,31	132,01	141,37
Missoula County	95,802	100,086	0	0	0	0	0
Powell County	7,180	6,999	7,260	7,490	7,810	8,080	8,480
Ravalli County	36,070	39,940	44,710	50,100	55,500	60,960	66,670
Sanders County	10,227	11,057	11,670	12,400	13,170	14,010	14,920
Silver Bow County	34,606	32,982	32,600	32,590	33,010	33,730	34,790
			341,83	367,17	393,91	422,09	452,41
Total		318,460	0	0	0	0	0

Source: NPA (2006)

*****This set of projections represents a 42 percent increase in population for the Clark Fork Basin counties.**

From Census Bureau:

See attached table entitled *US Census and Swanson Data/Estimates/Projection*.

From Growth Policies:

Deer Lodge County

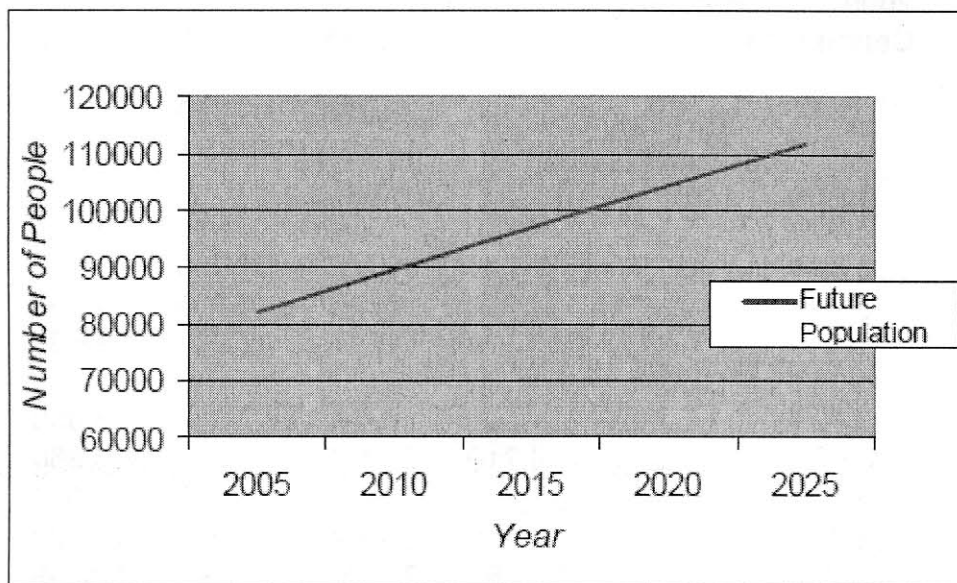
No Growth Policy could be located via internet.

Flathead County

The following material has been copied from the Flathead County Growth Policy (Flathead County 2007):

Projections are estimates illustrating plausible courses of future population change based on assumptions about future natural change and net migration patterns. These projections are trends established from existing population data. The projected population for Flathead County to the year 2025 is shown in Figure 3.5. The projected population for 2025 is 111,740 representing an increase of 37,269 people from the 2000 population. The projection shows that the total population is likely to increase by 50%. Based on existing natural change and net migration, this projected population will be due primarily to net migration and to a lesser extent by natural change.

Figure 3.5
Flathead County Population Projections– 2005 through 2025



Source: NPA Data Services, Inc, 2002

Granite County

The following material has been copied from the Granite County Growth Policy (Granite County 2004):

B. POPULATION

The 2000 Census shows that Granite County's population was 2,830. Of those persons, 914 live in the Town of Philipsburg and 318 live in the Town of Drummond. Granite County's population has remained stable in the 2,500-2800 range since 1970, but Philipsburg has decreased from 1,128 to 914, and Drummond has decreased from 494 in 1970 to 318 in 2000, although it gained population between 1990 and 2000.

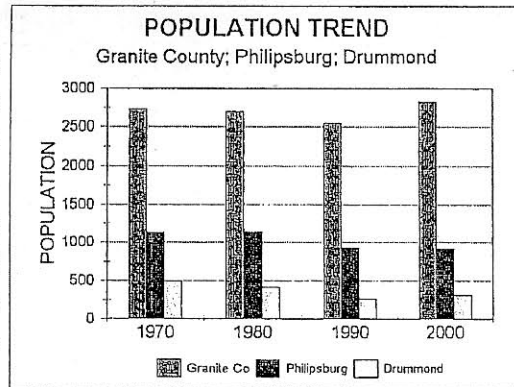


TABLE 3. POPULATION OF GRANITE COUNTY, PHILIPSBURG AND DRUMMOND

	<u>Granite County</u>	<u>Town of Philipsburg</u>	<u>Town of Drummond</u>
1970	2,737	1,128	494
1980	2,700	1,138	414
1990	2,548	925	264
2000	2,830	914	318

Source: U.S. Bureau of Census

The following table shows the break down of the Granite County population by age groups from the 2000 census, and shows the percentages for Montana as a comparison.

TABLE 4. GRANITE COUNTY POPULATION, PERCENTAGE BY AGE; MONTANA PERCENTAGE, 2000

	<u>--Granite County--</u>		<u>Montana</u>
	<u>No.</u>	<u>Percent</u>	<u>Percent</u>
Under 5 years	137	5%	6%
5 to 14 years	408	14%	15%
15 to 24 years	302	11%	15%
25 to 44 years	606	23%	27%
45 to 54 years	481	17%	15%
55 to 59 years	212	8%	5%
60 to 64 years	180	6%	4%
65 and older	450	16%	13%
Percent under 18		24%	25%
Percent 65 and older		16%	13%
Median Age		43 years	38 years

Source: U.S. Census; Montana Department of Commerce

Table 4 shows that in comparison to Montana, Granite County has an older population. Granite County has a higher percentage of people 65 and older (16% compared to 13% for Montana), and the median age of 43 years for Granite compared to 38 years for Montana.

Population and Employment Projections

The table below shows baseline projections for total population and total employment in Granite County. Baseline projections assume that no unusual event occurs that would cause a significant increase or decrease in population or employment.

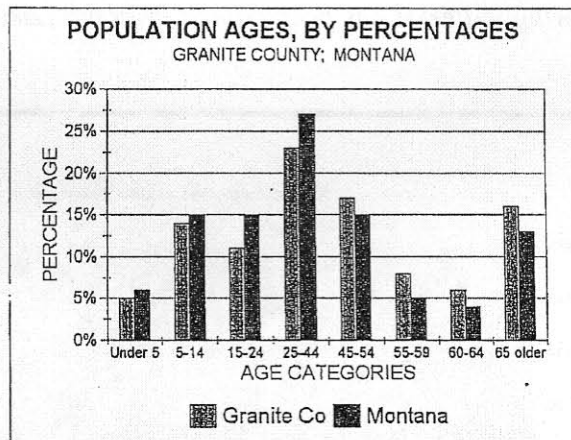


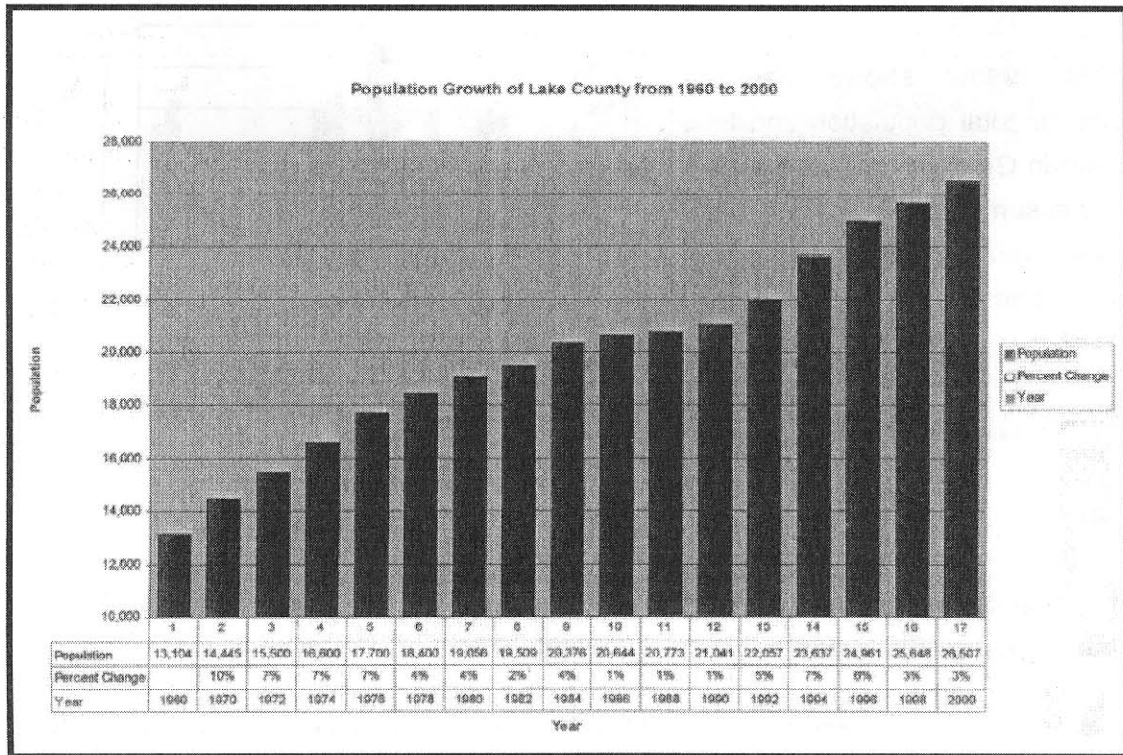
TABLE 5. PROJECTED EMPLOYMENT AND POPULATION

	<u>2000</u>	<u>2005</u>	<u>2010</u>
Total Population	2,830	3,000	3,200
Total Employment	1,765	1,800	1,850

Source: Jim E. Richard, Business Services, Inc.; Granite County Planning Board

Lake County

The following material has been copied from the Lake County Growth Policy (Lake County 2003):



The U. S. Census Bureau predicts that population growth in Lake County will continue at a rate of 1.8 percent annually through 2025. This translates into over 12,000 new residents over the 25-year period. Table 1-3 shows population projections for Lake County through 2025.

Table 1-3: Population Projections, Lake County Montana

Year	2000	2005	2010	2025
Projected Population	26,507	28,840	31,230	38,570
Percent Increase	NA	9	18	46
Projected Number of New Residents		2,333	4,723	12,063

Source: Montana Department of Commerce Census and Economic Information Center & NPA Data Services, Inc.,

Mineral County

No Growth Policy could be located via internet.

Missoula County

The following material has been copied from the Missoula County Growth Policy (Missoula County 2006):

POPULATION

- ⌚ Missoula County's population increased by an average annual growth rate of 2% per year between 1990 and 2000. During that decade, the County population increased by 17,115 people, or by 22%.
- ⌚ The areas of the County that showed the greatest rates of increase in population were Ninemile/Frenchtown, Wye/Mullan, East Missoula, Potomac/Seeley and Lolo/North Bitterroot Valley.
- ⌚ From 1990 to 2000, the proportions of the population under 18 years of age and 65 years or older increased less than the proportion of the population between the ages of 18 and 65.
- ⌚ Between 2000 and 2020, the Montana Department of Commerce projects Missoula County population to increase to 125,334, an average annual increase of 1.5% per year.
- ⌚ In 2000, Missoula County had 38,439 households, an increase of 25% from 1990.

The following material has been copied from the 2002 Missoula County Growth Policy:

POPULATION

- Missoula County's population increased an average of 2.2% per year between 1990 and 2000. Overall, the County population increased by 17,115 people, or 22%, during this decade.
- The areas of the County that showed the greatest rates of increase in population were Lolo, Frenchtown/Ninemile, Potomac/Seeley, and the Confederated Salish and Kootenai Tribal lands.
- The proportion of the population under 18 years of age has decreased and the proportion of the population 65 years and older has increased, reflecting the national trend of an aging population.
- Projections for population of Missoula County in 2020 range from 122,627 to 133,614, an increase between 1.4% and 1.9% per year from 2000.

Powell County

No Growth Policy could be located via internet.

Ravalli County

The following material has been copied from the Ravalli County Growth Policy (Ravalli County 2004):

Valuable demographic and economic data and analysis for Ravalli County have been produced and published as "The Bitterroot Valley of Western Montana AREA ECONOMIC PROFILE", prepared by Dr. Larry Swanson, Associate Director, O'Conner Center for the Rocky Mountain West, The University of Montana (November 2002.) This Profile is the source for much of the material in this section of the Growth Policy and is available for public review in the Ravalli County Planning Department.

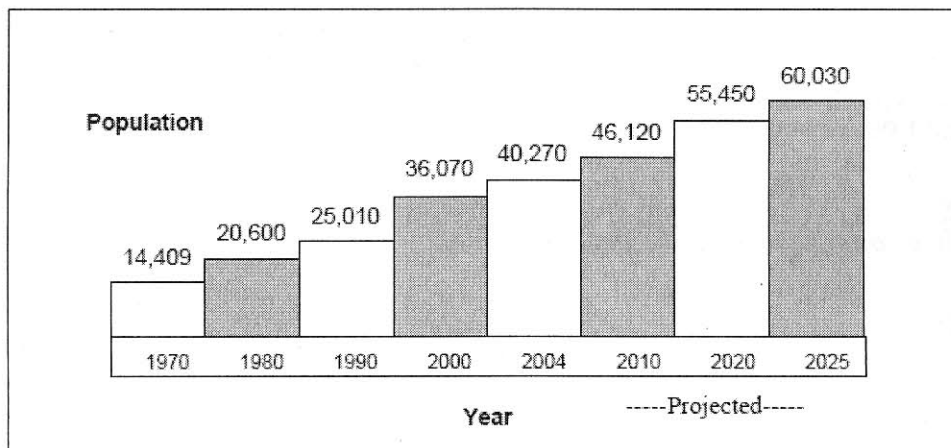
2.1: POPULATION

During the 1990s, Ravalli County was the fastest growing county in Montana based on percentage of increase and became one of the fastest growing counties in the entire nation. The Census reports that from 1990 to 1999, the population increased from 25,010 to 36,070—an increase of 44.2%. Between 1991 and 1996, the growth rate ranged from 4% to 6% per year. During the last three to four years, growth has slowed to about 2% per year.

Between the past two decennial Censuses there have been significant changes in urban versus rural population growth. According to the Census, the urban population growth rate was 121% (from 2,737 to 6,072) between 1989 and 1999. The percent change in rural non-farm population was an increase of 36.2% between 1989 and 1999, and there was an 11.8% increase in rural farm population during the same time period. Overall, the population split between rural and urban areas was 89% rural and 11% urban in 1989 and it was 83% rural and 17% urban in 1999. If these trends continue over the next 10 years, projected population growth will be primarily focused on existing population and community centers and there will be a fairly significant rural non-farm population growth. The rural farm population will experience the lowest growth rate of the three classifications.

(See Map 5: 2000 Census Block Population; and Map 9: Well Density Comparison, for information about the location of population centers in Ravalli County.)

Figure 1: Ravalli County Population Change 1970-2025.
Adopted from 2002 Ravalli County Economic Needs Assessment (Swanson) and the Montana Department of Commerce, 2004.



PAST AND PROJECTED TRENDS:

Some key population trends noted by the Swanson Profile:

○ Ravalli County will probably continue its rapid growth during the current decade.

“Population growth will almost certainly be governed by the rate of in-migration to the valley... The factor most affecting future growth is what will

happen to perceptions of the valley's attractiveness as this fast growth continues and increasingly takes its toll on the very thing enticing more people to move to the valley- the area's scenic qualities and rural character."- Dr. Larry Swanson. If the County continues to grow at an average rate of two percent per year, by 2010 the population could approach 45,000.

○ The County's population aged with large increases in the 45-64 years of age group, while the 65 and older group decreased as a percentage of the total population between 1990 and 1999. This counters the notion that much of the Valley's recent in-migration is retirees. *"The area may in fact be losing a disproportionate number of post-65-year olds who move away from the area, rather than actually adding to this elderly group through in-migration of retirees."*

○ Aging of the population will accelerate. The fastest-growing age groups, people in their mid-40s and early 60s, have doubled in the past 10 years.

○ This increasing aging of the population is producing a significantly lower birth rate. In 1980, the birth rate was 15.8 per 1,000 population. It fell to 9.8 by 1999. In comparable non-metro counties in the West, the birth rate fell to 13.8 in 1999.

○ The death rate in the Valley has declined from 10.0 deaths per 1,000 population in 1980 to 9.1 in 1999.

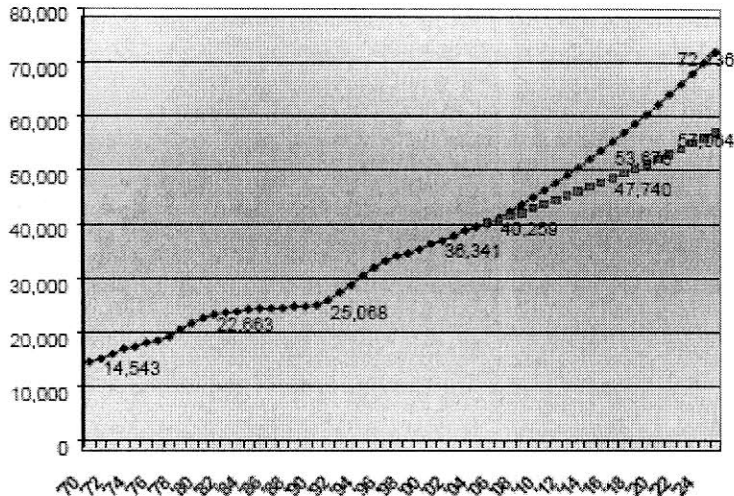
○ The school population is growing more slowly than the population increase. The pre-school population (under five years old) grew by only 14% during the 1990s.

More current information from Swanson (2006):

Past and Projected Population Growth in the Bitterroot Valley –

The latest population estimate for Ravalli County is 39,940 (July 1, 2005). This is an increase of 3,870 persons since the 2000 Census, growth of 10.7% with 92% of this growth resulting from net immigration (more people moving to Ravalli County than the number moving away, considering only those actually changing their county of permanent residence). In the mid-'90s, growth rose to as high as 5 to 6% annually, which is extremely fast growth. Growth more recently has ranged from as high as 2.7% in 2002-03 to as low as 1.2% in 2004-05. Future growth will hinge upon evolving migration patterns since net migration is accounting for much of Ravalli County's growth. Growth at 1.8 to 2.8% a year into the future would result in the population rising to 57,000 to 72,000 people by 2025.

Past & Projected Populations for Ravalli County



Projected Growth at 1.8%(Low) and 2.8% (High)

Recent population projections by the U.S. Census Bureau for states expect that the rate of net in-migration into Montana will fall over the course of the next ten years. If this comes to pass, this may translate into a lower rate of population growth in the Bitterroot Valley, placing more likely future growth at around 2%.

Sanders County

No Growth Policy could be located via internet.

Silverbow County

No Growth Policy could be located via internet.

References

Flathead County. 2007. Flathead County Growth Policy (adopted 2007). Kalispell, Montana: Flathead County Planning Department.

Granite County. 2004. Granite County Growth Policy (adopted 2004). Philipsburg, Montana: Granite County

Lake County. 2003. Lake County Growth Policy. Polson, Montana: Lake County Planning Department.

Missoula County. 2006. *Missoula County Growth Policy* (adopted 2002; amended and adopted 2006). Missoula, Montana: Missoula County Office of Planning and Grants.

NPA Data Services Inc. 2006. Montana Population Projections – Total Population. Helena, Montana: Census and Economic Information Center. Available: http://ceic.mt.gov/Demog/project/NPAallcounties_1106_web.pdf (last accessed 6/28/07).

Ravalli County. 2004. *Ravalli County Growth Policy* (adopted 2002; amended 2004). Hamilton, Montana: Ravalli County Planning Department.

Swanson, Larry. 2006. *Growth and Change in the Bitterroot Valley and Implications for Area Agriculture and Ag Lands*. Missoula, Montana: O'Conner Center for the Rocky Mountain West.

U.S. Census Bureau. 2007. American Factfinder's Population Estimates for Montana Counties. Available: http://factfinder.census.gov/home/saff/main.html?_lang=en (last accessed 6/28/07).

Appendix 3

Water Supply and Growth in the Clark Fork River Basin

I. Setting the Stage

- A. Water law primer (20 mins)
 - 1. State ownership and allocation of water
 - 2. First-in-time, first-in-use
 - 3. Tribal water rights
- B. Basin water supply facts (20 mins)
 - 1. Basin water balance
 - 2. Basin water use
- C. Recent legal rulings (20 mins)
 - 1. Thompson River Cogeneration water right
 - 2. TU vs. DNRC
- D. Population and economic growth (40 mins – 2 separate presentations. Can have Swanson again for demographics, or another, and perhaps someone w/ Bitterroot Econ. Develop. District present on economy).
- E. Water use projection (40 mins – Task force member presenting the basic info gathered this summer and some simple extrapolations)

LUNCH

II. Planning for Growth (20 mins)

- A. County growth policies
- B. Zoning and Subdivision regulations
- C. Water source protection

III. Water and Growth Issues (20 mins)

- A. Individual versus community wells
- B. Others

IV. Potential Sources of Water for Growth (1 hour)

- A. Existing water rights
 - 1. Water right changes
- B. Hungry Horse contracts

V. State & Local Government Coordination 1+ Hours)

Appendix 4

Status of the First-In-Time, First-In-Right Water Right Allocation and Management System

- I. Introduction
 - A. Historically, water in Montana allocated and managed according to the first-in-time, first-in-right system.
 - B. Forces underway to change that system to one in which decisions are made by use priority and in which water is increasingly the servant of money rather than priority date.
- II. History of water allocation and use.
 - A. Pre-1973 Water Use Act
 - 1. New uses supported by new water rights.
 - 2. Individual and court water right administration and enforcement based first-in-time, first-in-right system.
 - 3. No centralized records.
 - 4. Ground and surface water managed separately.
 - B. Post-1973 Water Use Act
 - 1. Water rights permits issued by DNRC for new and changed water uses.
 - 2. Beginning of state-wide adjudication because of concern arising from coal development.
 - 3. Reserved federal and tribal water rights.
 - a. Reserved Water Rights Compact Commission.
 - 4. Greater concern about protecting instream uses - water leasing program; Bean Lake III Supreme Court decision.
 - 5. Water reservations by public entities provide for future water needs in the Missouri and Yellowstone basins.
 - 6. Basin closures as perception increases of over appropriation.
 - 7. Ground water source of new water development.
 - 8. Greater concern about conjunctive management of surface and ground water - TU vs. DNRC Supreme Court decision.
 - 9. Adjudication
 - a. Legislative priority to complete temporary preliminary decree by June 30, 2020, for all basins in Montana.
 - b. Test driving decrees
 - 10. Post Adjudication
 - a. All water rights in enforceable water right decrees.
 - b. Water right integrated - water management will have less of a local focus
 - c. Diversions measured.
- III. Water Administration and Management Today
 - A. Creating domestic use priority outside of traditional water allocation and management system.
 - 1. 35 gpm/10 acre-ft/yr ground water permit exemption.
 - 2. DNRC "manifold" expands use of exemption in new subdivisions.
 - B. Conjunctive management of surface and ground water.
 - 1. Induced infiltration and prestream capture of tributary ground water
 - 2. Permitting in closed basins
 - C. Enforcement system increasingly complicated and expensive for individual water rights

holders

1. Influx of people unfamiliar with water rights creating more conflicts.
 2. Difficult to get timely decisions from district courts
 3. Water right integration will create new relationships among water rights and likely reduce local focus of water management.
 4. Water right integration will pose new challenges for decree enforcement via water commissioners.
 5. Traditional agricultural water right holders cannot pay enforcement costs.
- D. Water right changes
1. Only consumptive portion of rights may be changed.

IV. Clark Fork River Basin Water Supply

- A. No water reservations for future uses in the Clark Fork River.
- B. Implications of the Thomas River Cogeneration water right decision.
- C. Future supply alternatives
 1. Hungry Horse contract(s)
 - a. Private contracts
 2. Purchasing existing water rights
 - a. Likely shifts water away from agriculture